

Serial No. 10/619,932

Dkt.: P0011481.00US

Filing Date: July 15, 2003

Title: CANNULA HAVING BUCKLE RESISTANT APERTURES

Amendments to the Claims

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A venous cannula, comprising:

a valveless body having a proximal end sized and adapted for connection to a cardiac bypass system and a distal end, the body having a wall defining a lumen extending from the proximal end to the distal end, the lumen having a longitudinal axis; the body being sized and shaped to afford placement of the cannula in a portion of the venous system of a patient; and

a plurality of valveless apertures in the wall interconnected with the lumen and permitting fluid flow from outside the lumen into the lumen for transport through the lumen, wherein the apertures have first and second corners defined by arcuate portions that intersect with each other, wherein each of the apertures has a longer major axis and a shorter minor axis with the first and second corners along the longer major axis, and wherein the longer major axis is perpendicular to the longitudinal axis of the lumen.

2. (Canceled)

3. (Previously Presented) The cannula of claim 1, wherein the apertures are eye-shaped.

Claims 4-5 (Canceled)

6. (Original) The cannula of claim 1, wherein the apertures are arranged into a plurality of rows generally extending along the longitudinal axis of the lumen.

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7. (Original) The cannula of claim 6, wherein the rows are evenly distributed on the body and the apertures of adjacent rows are offset such that the apertures in the adjacent rows are different distances from a distal tip of the body.

8. (Currently Amended) A venous cannula, comprising:

a valveless body having a proximal end sized and adapted for connection to a cardiac bypass system and a distal end, the body having a wall defining a lumen extending from the proximal end to the distal end, the lumen having a longitudinal axis; the body being sized and shaped to afford placement of the cannula in a portion of the venous system of a patient; and

a plurality of valveless apertures in the wall interconnected with the lumen and permitting fluid flow from outside the lumen into the lumen for transport through the lumen, wherein the apertures include first and second corners defined by arcuate portions that intersect with each other such that the corners do not buckle outwardly as the cannula is flexed.

9. (Canceled)

10. (Original) The cannula of claim 8, wherein each of the apertures has a longer major axis and a shorter minor axis, and wherein the longer major axis is perpendicular to the longitudinal axis of the lumen.

11. (Canceled)

12. (Original) The cannula of claim 8, wherein the apertures are arranged into a plurality of rows generally extending along the longitudinal axis of the lumen.

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13. (Original) The cannula of claim 12, wherein the rows are evenly distributed on the body and the apertures of adjacent rows are offset such that the apertures in the adjacent rows are different distances from a distal tip of the body.

Claims 14-22 (Canceled)